



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,382	02/03/2006	Ralf Schneider	NY-DNAG-311-US	3662
24972	7590	05/12/2008		
FULBRIGHT & JAWORSKI, LLP 666 FIFTH AVE NEW YORK, NY 10103-3198			EXAMINER ZHENG, LOIS L	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 05/12/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,382	<b>Applicant(s)</b> SCHNEIDER ET AL.	
	<b>Examiner</b> LOIS ZHENG	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 17-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 17-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/19/05, 1/12/06</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Claims***

1. Claims 1, 22, 32-33 are amended in view of applicant's preliminary amendment filed 3 February 2006. Claims 2-16 are canceled in view of preliminary amendment. Therefore, claims 1 and 17-34 are currently under examination.

Note, the status identifier for claims 32-33 should read "currently amended".

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 17-30 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meagher et al. US 2002/0096229(Meagher).

Meagher teaches a process for treating metal surfaces with an aqueous acidic zinc phosphate coating solution (abstract, paragraph [0036]) comprising:

- 0.75-5% of phosphate (paragraph [0022])
- 0.05-2% of Zn (paragraph [0024-25])
- 0.005 – 0.5% of manganese (paragraph [0029])
- Ca and Mg are present from hard water source(paragraph [0035]), but preferably, no more than 0.5% each(paragraph [0045])
- Nitroguanidine (paragraph [0033])

Art Unit: 1793

- 0.3-4ppt of chlorate and/or 0.005-0.15ppt of hydrogen peroxide (paragraph [0033])
- 0.25-15ppt, or preferably 0.25-4ppt of complex fluoride such as  $\text{HBF}_4$  (paragraph [0039-0041])
- 0.05-5ppt of free fluoride (paragraph [0041])
- 0.05-15ppt of total fluoride (paragraph [0042])
- Free acid ranges from 0.3-10 and total acid ranges from 13-50 (paragraph [0037])

Regarding claim 1, the phosphate, zinc, manganese, Ca/Mg, chlorate/hydrogen peroxide, complex/simple/total fluoride concentrations in the coating solution of Meagher read on the claimed concentrations.

In addition, the ratio of free acid to total acid calculated from the free acid and total acid ranges as taught by Meagher encompasses the claimed FA/TA ratio. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed FA/TA ratio range from the disclosed range of Meagher would have been obvious to one skilled in the art since Meagher teaches the same utilities in its' disclosed FA/TA ratio range.

Furthermore, even though Meagher does not explicitly teach the claimed amount of nitroguanidine in the coating solution, one of ordinary skill in the art would have found it obvious to have varied the concentration of nitroguanidine via routine optimization in order to achieve the desired coating formation rate since Meagher teaches

nitroguanidine as an accelerator for speeding up the coating formation(paragraph [0033]).

Regarding claim 17, Meagher further teaches adding 0.001-1.7% of nitrate to the coating solution(paragraph [0033]), which overlaps the claimed nitrate amount. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed nitrate concentration range from the disclosed range of Meagher would have been obvious to one skilled in the art since Meagher teaches the same utilities in its' disclosed nitrate concentration range.

Regarding claim 18, Meagher further teaches adding 0.01-0.2ppt of nitrite to the coating solution(paragraph [0033]).

Regarding claims 19-20, the ratio of total fluoride to magnesium and the ratio of total fluoride to calcium calculated from the coating solution of Meagher encompass the claimed total fluoride/Mg and total fluoride/Ca ratios. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed total fluoride/Mg and total fluoride/Ca ratio ranges from the disclosed ranges of Meagher would have been obvious to one skilled in the art since Meagher teaches the same utilities in its' disclosed total fluoride/Mg and total fluoride/Ca ratio ranges.

Regarding claim 21, Meagher further teaches adding 0.01-0.2% of nickel to the coating solution(paragraph [0029]).

Regarding claims 22-23, since the instant claims include zero amounts of chloride and sulfate ions, the coating solution of Meagher, although does not specifically include chloride or sulfate ions, still meets the limitations of the instant claims.

Regarding claims 24-26, Meagher teaches the claimed  $\text{BF}_4$  in an amount that either reads on or significantly overlaps the claimed  $\text{BF}_4$  concentration ranges. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed  $\text{BF}_4$  concentration range from the disclosed range of Meagher would have been obvious to one skilled in the art since Meagher teaches the same utilities in its' disclosed  $\text{BF}_4$  concentration range.

Regarding claim 27, Meagher teaches that its coating solution is acidic (paragraph [0036]), which encompasses the claimed pH range of 0.1-4. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed pH range from the disclosed range of Meagher would have been obvious to one skilled in the art since Meagher teaches the same utilities in its' disclosed pH range.

Regarding claims 28-30, Meagher further teaches that its coating process produces a phosphate coating having a layer weight of  $1.6\text{-}10\text{g/m}^2$  (paragraph [0055]). In addition, Examples of Meagher shows that the phosphate crystals in the coating of Meagher is measured less than 20 or even less than 10 microns (Table 6). Furthermore, since coating layer thickness depends on duration of the coating treatment (i.e. the longer the coating treatment duration, the thicker the coating layer) and the level of corrosion protection desired (i.e. the thicker the coating layer, the better/longer the corrosion protection), one of ordinary skill in the art would have found it obvious to have varied the coating layer thickness by varying the coating treatment time via routine optimization in order to achieve the desired level of corrosion protection.

Regarding claim 32, the rejection of FA/TA ratio is set forth in the rejection of claim 1 above. In addition, Meagher further teaches that the coating solution should not contain large amount of free fluoride since large amount of free fluoride promotes etching of the substrate(paragraph [0040]), Therefore, deriving from this particular teaching from Meagher, the examiner concludes that the coating solution of Meagher does not excessively etches the substrate and the inherent ratio of the pickling erosion on the metal surface to the layer weight is less than 75% as claimed.

Regarding claims 33-34, the instantly claimed coating composition and coated metal object do not distinguish from the coating composition and the coated metal object as taught by Meagher for the same reasons as set forth in the rejection of claims 1 and 17 above.

4. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meagher, and further in view of by WO 2002/070782(published 12 September 2002), whose corresponding English equivalent is Kolberg et al. US Patent Application Publication 2004/0129346 A1(Kolberg).

The teachings of Meagher are discussed in paragraph 3 above. However, Meagher does not explicitly teach the claimed after-coat comprising lubricant.

Kolberg teaches a process of treating metal surfaces with an aqueous acidic zinc phosphate solution comprising Zn, phosphate, Mn, chlorate, nitrate, hydrogen peroxide, nitroguanidine, free/complex fluoride and Ni(abstract, paragraphs [0020, 0022-0023, 0025-0027, 0029-0030, 0032-0035, 0038]). Kolberg further teaches that the phosphate coated metal surface can be coated with a layer of oil or lubricant in order to increase

Art Unit: 1793

corrosion resistance and to protect the metal surface during transportation (paragraph [0107]).

Regarding claim 31, it would have been obvious to one of ordinary skill in the art to have incorporated the oil or lubricant application as taught by Kolberg after the zinc phosphate process of Meagher in order to increase corrosion resistance and to protect the metal surface during transportation as taught by Kolberg.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 17-27 and 31-34 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 27-28, 31, 34-37, 39-41 and 46-50 of copending Application No. 10/555,929. Although the conflicting claims are not identical, they are not patentably distinct from each other



because copending Application No. 10/555,929 teaches a process, a coating composition and a coated metal object that is substantially the same as claimed due to its significantly similar coating composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1 and 17-34 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5-15, 18-19, 21-22, 31, 34, 37-40 of copending Application No. 10/467,850. Although the conflicting claims are not identical, they are not patentably distinct from each other because copending Application No. 10/467,850 teaches a process, a coating composition and a coated metal object that is substantially the same as claimed due to its significantly similar coating composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mayer et al. US 6,379,474 B1 teaches a zinc phosphate coating composition that is very similar to the claimed coating composition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LOIS ZHENG whose telephone number is (571)272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

Art Unit: 1793

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

LLZ  
5/7/08